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[54] **METHOD AND APPARATUS FOR PROVIDING FAIR TRAFFIC SCHEDULING AMONG AGGREGATED INTERNET PROTOCOL FLOWS**

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[52] **U.S. Cl.** **370/235**

[58] **Field of Search** 370/229–235, 370/252, 253, 390, 389, 391, 392, 351–356

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[57] **ABSTRACT**

A method and apparatus is disclosed for providing fair traffic scheduling of L2 connections based on the number of IP flows and a priority coefficient for flow groups in the L2 connection. IP flows are scheduled according to a priority coefficient. The system identifies a number of IP flows for a plurality of connections, assigns a priority coefficient for each of the IP flows and schedules the IP flows according to the priority coefficient. The assignment of a priority coefficient results in a probability P_i that a data unit belonging to a flow carried over connection A_i will be selected for forwarding as defined by $\sigma_i * x_i / \Sigma(x_1 \ldots x_n)$, $i=\{1,2, \ldots n\}$, where x_i is the number of flows carried over connection A_i, σ_i is the priority and n is the number of connections. The relationship between the number of flows x_i and the priority σ_i is defined by $\Sigma_{(e-1-n)}(\sigma_i * x_i)/\Sigma_{(i-1-n)} x_i=1$.

32 Claims, 6 Drawing Sheets